

Bartlett-Snow™ Rotary Coolers

The choice for process solids cooling

- Units are simple to erect, easy to operate and require minimal maintenance
- Extensive range of systems, components and services
- Designed and manufactured with exacting standards



Bartlett-Snow™ Rotary Coolers are engineered to ensure reliable operation, enhanced efficiency, maximum availability and ease of maintenance. Units are simple to erect, easy to operate and require minimal maintenance.

We offer an extensive range of systems, components and services to support the Bartlett-Snow™ product line. From initial pilot plant testing, equipment design and manufacture; to training, start-up and commissioning; maintenance assistance and supply of replacement parts, we are committed to meeting our client's needs.

Design features

Bartlett-Snow™ Rotary Coolers are designed and manufactured with exacting standards to meet processing requirements for a variety of industries worldwide.

Material used for cooler construction vary based on the process requirements for a given application. These materials include carbon steel, stainless steel, high grade alloys, and composite cladding.

Direct air-swept coolers are available in sizes ranging from:

- Diameter range: 18-156in / 457-3962mm
- Length range: 10-100ft / 3.04-30.48m

Indirect water cooled rotary coolers are available in sizes ranging from:

- Diameter range: 6-120in / 152-3048mm
- Length range: 10-100ft / 3.04-30.48m

Typical materials processed include activated carbon, alumina, ammonium nitrate, ammonium phosphate, catalysts, clays, coke, ferrites, food products, glass spheres, granulated fertilizer, manganese oxide, metal turnings and borings, metallic oxides, nuclear materials, proppants, pigments, rare earth compounds, sand, titanium dioxide, and urea.

System overview

Bartlett-Snow™ Rotary Coolers are offered in two designs, one utilizing atmospheric or conditioned air and the other using indirect water spray as the cooling media. These designs are readily adaptable to a wide variety of processing applications and are offered as stand-alone units, or as part of a complete thermal processing system.

Air-swept cooler

Air-swept rotary coolers use air as the cooling media. The hot process material is introduced into one end of the rotating cylinder where it is lifted on flights secured to the ID of the cylinder and showered through the cooling air stream. Air passes through the cylinder counter-current to the material providing the most efficient heat transfer and coolest product temperature. In special cases, air for cooling can be refrigerated to remove moisture from it or to cool the product below ambient temperature.

If the material to be cooled is at an extremely high temperature, the feed end of the cooler can be refractory lined or fabricated from high temperature alloys to prevent damage to the cylinder. Used in series with direct fired rotary dryer or rotary kiln, the hot air leaving the cooler can serve as preheated secondary combustion air, thus increasing the thermal efficiency of the drying or heating process.



Indirect water spray cooler

Indirect coolers are an excellent way to cool process solids that are easily entrained, need to be gently handled, or require special process atmospheres, including inert, oxidizing or reducing gases. The indirect water spray cooler design features a rotating cylinder housed along its active length in a water jacket.

Arranged within the water jacket are series of water spray nozzels that direct cooling water over the exterior of the cylinder. Evaporation of the water cools the wall of the cylinder, which cools the material inside. Clean water is the recommended cooling media; however, special nozzels and water distribution systems are available for operations that required use of waste water or recirculated water that may have suspended particle matter.



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